REMARKS

The Applicant respectfully submit the foregoing amendments and following remarks, following receipt of the Decision on Appeal mailed August 30, 2006. As amended, claims 1-2, 5-9 and 11 remain pending in the application.

The Applicant has amended independent claims 1 and 9 to further recite features of the present invention, as well as to incorporate limitations of their respective dependent claims 3-4 and 9, which have been cancelled without prejudice to the subject matter therein.

Specifically, as discussed in previous filings in this case, the present invention is directed to a system and method for vehicles with two brake systems (*i.e.*, a "friction brake" (*e.g.*, a wheel brake) and an "active retarding brake" (*e.g.*, a device which is engaged to provide engine braking, such as a so-called "Jake brake" used to control exhaust valve actuation on a diesel engine), in which the use of the brakes is "blended" to optimize the demands for immediate vehicle braking vs. minimizing brake wear. In an advance over the prior art, rather than maintaining a fixed relationship between the braking systems, the inventive system and method employs at least one of an adaptive distance regulation and driving speed device to detect a hazard, and then, based *on the urgency of the detected hazard*, determines how to apportion the braking demand between the two braking systems. For example, at high urgency values, the desired braking force is distributed to the friction brake and the active retarding brake in order to achieve the fastest possible application of the brakes, while at low urgency values the active retarding brake is maximally utilized in order to

minimize wear and tear on the friction brakes. *See, e.g.*, Specification at ¶ [0017].

Consistent with the above, the Applicant has amended independent claims 1 and 9 to expressly recite: (i) the modulation of an urgency signal (upon which the split of braking between the braking systems is made) occurs "*after* detection of a hazard"; and (ii) the urgency signal is "indicative of a degree of urgency of the detected hazard based upon a hazard variable" and "is variable between a value indicating no urgency and a value indicating a greatest urgency."

In contrast to the invention recited in amended claims 1 and 9, the cited references fail to teach or suggest distribution of brake forces between *active* brake systems based on a variable assessment of braking urgency. The primary reference, Seto (U.S. Patent Publication No. 2002/0152015 A1), teaches either (i) maintaining a first vehicle operating mode if no other vehicle is present (*i.e.*, speed control "[in] the absence of the preceding vehicle detection"), or (ii) a second vehicle operating mode (*i.e.*, vehicle-separation control "[in] the presence of the preceding vehicle detection"). Seto at ¶[0031]; Fig. (steps S006). In order words, Seto teaches only a binary system: detecting a hazard, and if a hazard is present, switching from cruise control to distance-management mode.

Seto does not, however, provide any suggestion of the present invention's novel approach of – *after* detecting the presence of a hazard – of then *assessing how urgent that hazard is*, and appropriately apportioning the amount of braking to be performed by two separate *active* braking systems *based* on the urgency assessment (and doing so in a manner which minimizes brake wear while

simultaneously ensuring sufficient brake force is applied to avoid the hazard). As described at Seto ¶¶ [0049]-[0054], in the distance-management mode ("hazard present"), either the throttle is open (throttle opening command θr>0) and the wheel brakes are not applied (Tbr=0, *i.e.*, there's no brake force to distribute), or the throttle is closed (θr=zero), in which case the engine braking force is *fixed* (at the value corresponding to a closed throttle, *see* ¶ [0051]) while the wheel brakes are engaged as needed – in other words, there is no suggestion of brake force distribution, let alone distribution or other optimization *based on the relative urgency of the previously detected hazard.*[1] Seto therefore fails to teach or suggest these features of the present invention recited in claims 1 and 9.

CONCLUSION

In view of the foregoing, the Applicant submits that independent claims 1 and 9, and their respective dependent claims 2, 5-8 and 11, are patentable over the Seto and Chakraborty references. Early and favorable consideration, and issuance of Notice of Allowance for claims 1-2, 5-9 and 11 is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

[1] For its part, the Chakraborty reference (U.S. Patent No. 5,839,534), cited for engine braking as a retarder, contains nothing which would suggest to one skilled in the art the present invention's active brake system distribution based on the relative urgency of a previously detected hazard.

please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #037068.52641US).

Respectfully submitted,

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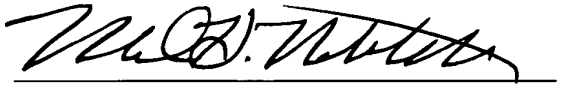

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